

CLAIMS

We claim:

1. A method of detecting the presence of HCC in a mammal comprising:
 - a) obtaining a biological sample from the mammal;
 - 5 b) assaying the sample to quantify at least a non-cell-associated HCC related protein; and
 - c) comparing the quantity of the non-cell-associated HCC related protein to a control level.
2. The method of claim 1 wherein assaying the sample is selected from the group
10 consisting of using an enzyme linked immunosorbent assay (ELISA) and competition assays using monoclonal, polyclonal, or a combination of monoclonal and polyclonal antibodies.
3. The method of claim 1, wherein assaying the sample includes using a receptor molecule that interacts specifically with the non-cell-associated HCC related protein.
- 15 4. The method of claim 1, wherein assaying the sample includes an activity assay and the non-cell-associated HCC related protein is selected from the group consisting of an enzyme and involved in a quantifiable chemical or biological reaction.
5. The method of claim 2 wherein the polyclonal antibodies include those that bind PLA2G13.
- 20 6. A method of detecting the presence of HCC in a mammal comprising:
 - a) obtaining a tissue sample from the mammal;
 - b) assaying the sample to quantify at least one of a cell-associated HCC related protein; and
 - c) comparing the quantity of cell-associated HCC related proteins to
25 a control level.
7. The method of claim 6, wherein the tissue sample is obtained by biopsy.
8. The method of claim 6, wherein the tissue sample is a liver tissue sample.
9. The method of claim 6 wherein assaying the sample is selected from the group
30 consisting of competition assays using monoclonal, polyclonal, or a combination of monoclonal and polyclonal antibodies.
10. The method of claim 9 wherein the polyclonal antibodies include those that bind PLA2G13.
11. A method of detecting HCC in a mammal comprising:

- a) injecting the mammal with a conjugate including a targeting reagent and an imaging agent;
- b) imaging the mammal; and
- c) evaluating the resulting image for the presence of at least one of a cell-associated HCC related protein.

12. The method of claim 11, wherein the targeting agent is selected from at least one of the group consisting of an antibody, a receptor and a ligand and wherein the antibody, receptor and ligand specifically interacts with at least one of the cell-associated HCC related proteins.

13. The method of claims 11 or 12 wherein the targeting agent is anit-PLA2G13.

14. The method of claim 11, wherein the imaging agent is selected from the group consisting of a dye, radioisotope and a compound that enhances the sensitivity of a scanning methodology selected from the group consisting of magnetic resonance imaging (MRI), ultrasound, computer assisted tomography (CT), single photon emission computer assisted tomography (SPECT) and immunoscintigraphy.

15. A method of detecting HCC in a mammal comprising:

- a) obtaining a sample of the mammal's liver tissue; and
- b) assaying for transcription of at least one of a HCC related protein by at least one of the group consisting of a reverse transcriptase polymerase chain reaction (RT-PCR) and a nucleic acid hybridization method.

16. A method of detecting HCC in a mammal comprising:

- a) obtaining a sample of the mammal's liver tissue; and
- b) employing at least one of the group consisting of an immunocytochemistry technique using a cell-associated HCC related protein-specific antibody conjugated to at least one imaging agent and an immunohistochemistry technique using a cell-associated HCC related protein-specific antibody conjugated to at least one imaging agent.